UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

<u>Ex parte</u> DONG-SEEK PARK
and KOOK-YEOL YOO

Appeal No. 2003-1523
Application 09/432,426[1]

HEARD: December 11, 2003

Before BARRETT, GROSS, and BLANKENSHIP, <u>Administrative Patent
Judges</u>.

BARRETT, <u>Administrative Patent Judge</u>.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134(a) from

the final rejection of claims 1 and 31. Claims 2-30 and 32-42

are allowed.

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[1] Application for patent filed November 2, 1999, entitled
"Video Coding and Decoding Methods," which claims the foreign
filing priority benefit under 35 U.S.C. § 119 of Republic of
Korea Application 98-46824, filed November 2, 1998.

We reverse.

BACKGROUND

The invention relates to a video coding and decoding method. During the decoding process, status information indicating an "error profile" of the communication channel is extracted and transmitted to the encoder. The encoder adaptively adds redundancy information into the video data stream in a layer configuration based on the channel status information.

Claim 1 is reproduced below.

1. A video coding method implemented in a video data transceiver for transmitting and receiving video data through a communications channel, the method comprising the steps of:

receiving channel status information indicating an error profile of the communication channel; and

adaptively adding redundancy information into data packets, the data packets being syntax divided in a layer configuration based on the channel status information.

The examiner relies on the following reference:

Watanabe et al. (Watanabe)   6,310,897   October 30, 2001
                                    (§ 102(e) date May 1, 1998)

Claims 1 and 31 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Watanabe.

We refer to the final rejection (Paper No. 8) and the examiner's answer (Paper No. 16) (pages referred to as "EA__")

for a statement of the examiner's rejection, and to the brief

(Paper No. 15) (pages referred to as "Br__") and reply brief

(Paper No. 17) (pages referred to as "RBr__") for a statement of

appellants' arguments thereagainst.

<center>OPINION</center>

Claim 1

Claim 1 is directed to a video coding method that includes

the step of "receiving channel status information indicating an

error profile of the communication channel."

Appellants argue that Watanabe does not teach "receiving

channel status information indicating an error profile of the

communication channel," as recited in claim 1 (Br3-4; RBr2).

A section 103 analysis begins with a key legal question:

What is the invention claimed? Panduit Corp. v. Dennison Mfg.

Co., 810 F.2d 1561, 1567, 1 USPQ2d 1593, 1597 (Fed. Cir. 1987).

In particular, we must interpret the term "error profile." We

have not been successful in finding a formal definition of "error

profile" in a technical dictionary or on the Internet, although

the term is frequently used. Appellants' specification shows

three CDMA "error profiles" in Table 1 at page 8. The error

profiles have parameters of Doppler Frequency (Hz), Average BER

(Bit-Error Rate), and Average Burst Length (Bits). Thus, the

"error profile" can be defined as the characterization (profile)

of the type and magnitude of channel error statistics, which is

<center>- 3 -</center>

consistent with the discussions we found on the Internet.[2] Thus,

the claimed "channel status information indicating an error

profile of the communication channel" would be one of the three

error profiles, Error 1, Error 2, or Error 3. An "error profile"

must be something different than just an "error" or the word

"profile" would be given no effect. "All words in a claim must

be considered in judging the patentability of that claim against

the prior art." In re Wilson, 424 F.2d 1382, 1385, 165 USPQ 494,

496 (CCPA 1970).

The examiner does not interpret or discuss the meaning of

"error profile." The examiner finds that Watanabe discloses

detecting an error on the decoding side in the error check

circuit 125 of Fig. 2, which causes output of a retransmission

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[2] See Mark Cummings, Wireless Infrastructure: Voice-over-IP
architectures migrate to wireless, September 11, 2001,
URL: http://www/commsdesign.com/story/OEG20010911S0018:

> The error profiles of wireless systems generally differ from
> wired systems in that the errors are very likely to come in
> bursts. For example, when a single signal splits and
> follows two or more paths to the other node, arriving at
> different times (known as multipathing), out-of-order packet
> and multiple-packet errors can result. Another effect,
> fading, can produce long gaps in information streams, and
> Doppler shifts can disrupt timing and sequencing. In fact,
> recent research indicates that even stationary wireless
> systems in metropolitan areas experience Doppler shifts
> because of the movement of objects in their vicinity. In
> addition, long distances between nodes in wireless systems-
> such as in direct satellite systems-are subject to echoing
> errors and special problems with gaps in information
> streams. Furthermore, all these types of errors can occur
> in combination.

request, referring to column 11, lines 1-3 (EA3-4; EA5), and

states that "the channel information status indicating an error

profile is considered as the part in error that is detected by

the error check circuit (125 of fig. 2) of the decoding side"

(EA6). Therefore, the examiner interprets the "error" to be an

"error profile" and the retransmission request to be "channel

status information indicating an error profile of the

communication channel." Based on our claim interpretation, we

conclude that this is an error. An "error" is not an "error

profile" which characterizes the type and magnitude of the

errors. Furthermore, while a retransmission request may indicate

that an error occurred, it does not indicate anything about the

"error profile," i.e., about the type and magnitude of the

errors. Accordingly, this basis for the rejection is reversed.

The examiner also states (EA5):

It is well recognized [that] the H.263 encoder is well known
in the art for transmitting or receiving the channel status
information indicat[ing] the error profile from the decoder
(note the appellant/applicant's specification shows the
H.263 encoder (102 of fig. 1) that has been used to receive
the channel status information). According to the
appellant/applicant's specification, the H.263 encoder is
[sic, as] disclosed in Watanabe must have the same function
of receiving channel status information indicat[ing] an
error profile of the communication channel as well.

Appellants respond that many different techniques have been

proposed for H.263 error resilience, but no technique had yet

been adopted at the time of filing the application and, thus, the

fact that both the present invention and Watanabe disclose the

H.263 scheme does not lead to the conclusion that the present

invention and Watanabe disclose the same H.263 scheme (RBr3).

We agree with appellants. It appears that the examiner has

assumed that H.263 inherently provides for receiving channel

status information indicating an error profile of the

communication channel, so that the mention of H.263 in Watanabe

(col. 1, line 38) suggests receiving error profile information.

The examiner provides no evidence that the H.263 standard calls

for receiving error profile information. Since appellants are

arguing the limitation of "receiving channel status information

indicating an error profile of the communication channel," it is

clear that appellants do not think this is part of the H.263

standard. This alternative basis for the rejection is reversed.

For the reasons stated above, the rejection of claim 1 is

reversed.

Claim 31

Claim 31 recites a video decoding method, including the step

of "inputting a video bitstream to which redundancy information

has been adaptively added to data packets based on channel status

information indicating an error profile of the communication

channel" (emphasis added). For the reasons stated in connection

with claim 1, we find that Watanabe does not teach or suggest

encoding based on channel status information indicating an "error

profile" of the communications channel. Thus, Watanabe does not

render obvious the subject matter of claim 31. The rejection of

claim 31 is reversed.

<div align="center">CONCLUSION</div>

The rejection of claims 1 and 31 is reversed.

<div align="center">REVERSED</div>

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          LEE E. BARRETT                 )
          Administrative Patent Judge    )
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